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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/619,944	WILSON ET AL.	
	Examiner	Art Unit	
	Jonathan G. Sterrett	3623	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *29 August 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-12,14,16-26,28-30,32-36,38,39,41 and 42* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-12, 14, 16-26, 28-30, 32-36, 38, 39, 41 and 42* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 8-29-07 has been entered.

2. This **Non-Final Office Action** is responsive to the amendment filed 8-29-07. Currently **Claims 1-12, 14, 16-26, 28-30, 32-36, 38, 39, 41 and 42** are pending.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Response to Amendments

4. The 35 USC 112 rejections are withdrawn.

Response to Arguments

5. The applicant's arguments regarding **Claims 1-12, 14, 16-26, 28-30, 32-36, 38, 39, 41 and 42** have been fully considered but they are not persuasive.

6. The applicant's arguments regarding **Claims 1-12, 14, 16-26, 28-30, 32-36, 38, 39, 41 and 42** have been fully considered but are not persuasive.

7. The applicant argues that the combination of references constitutes impermissible hindsight.

The examiner respectfully disagrees.

In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

8. The applicant argues with respect to Claim 18 on page 17 that the cited references of Norand fail to teach assigning first and second tasks via two different interfaces.

The examiner respectfully disagrees.

Norand teaches an interface for technicians in the field to receive task assignments (see Norand Reference D page 1 para 2, the system assigns calls to those technicians carrying the mobile computer in the field). The fact that the applicant is claiming two different interfaces and assigning two different tasks (i.e. a first task and a second task) does not distinguish over the prior art. The assignment of service calls (see para 2) includes at least a first task (i.e. a first service call) and a second task (i.e. a second service call since more than one call is assigned). As noted below, claiming two different interface modules does not patentably distinguish over the prior art (see In re Wolfe, 116 USPQ 443, 444 (CCPA 1961)) and see In re Harza, 124 USPQ 378 (CCPA 1960) "Mere duplication of parts has no patentable significance unless new and unexpected result is produced").

9. The applicant argues with respect to Claim 28 on page 17 that Norand does not teach a web page that displays a request status.

The examiner respectfully disagrees.

Reference C page 2 para 1 of Norand teaches that the mobile wireless computing platform provides internet and web browsing capability. Reference B of Norand page 2 para 1 teaches that dispatchers can receive real time status updates

from the field. The limitations of Claim 28 are addressed by an obvious combination of the teachings contained within Norand – please see the 103(a) rejections below.

10. The applicant argues that Claim 41 on page 18 is not taught by Norand.

The examiner respectfully disagrees.

Norand teaches the use of the internet and webpages in the mobile dispatching system. Norand teaches the receiving of status updates over it's system by dispatchers. The cited limitations in Claim 41 are an obvious combination of what is already contained in Norand (see Reference D page 1 para 2;page 2 para 1 and Reference C page 2 para 1).

11. The applicant argues with respect to Claim 38 on page 19 that the cited references fail to teach the assigning of a first task to a first technician using a first interface and the assignment of a second task to a second technician via a second interface.

The examiner respectfully disagrees.

Norand teaches assigning of tasks to technicians using a single interface. Norand teaches more than one call (i.e. service calls) are assigned to technicians. While Norand does not explicitly teach two separate interfaces for technicians to interface with in the receiving and transmitting of service call (i.e. task) information, the cited limitations do not distinguish over the prior art of Norand. (see In re Wolfe, 116 USPQ 443, 444 (CCPA 1961)) and see In re Harza, 124 USPQ 378 (CCPA 1960)

"Mere duplication of parts has no patentable significance unless new and unexpected result is produced").

12. the applicant argues that the cited references teach away from a proposed combination on page 19.

The examiner respectfully disagrees.

The cited limitations of Norand provide teachings in combination that provide a predictable result. The fact that the hardware/software components provided by Norand in different industries other than in telecommunications dispatch does not mean that the combined teachings as cited teach away from the claimed invention. This is similar to an argument that because a computer is used in an office environment precludes its use in a factory environment. In this case the advantages of using a computer to automate tasks is the salient characteristic that is independent of the field of use. Similarly the fact that Norand is teaching the use of a wireless computing system in non-utility markets does not mean that the wireless computing system cannot be used there. A person of ordinary skill in the art would recognize that if a mobile computing system like Norand's can dispatch and track field technicians in their assignment and completion of tasks, then the nature of the task is irrelevant.

Furthermore, the examiner would point out that the cited combinations of references, either Norand or Weigel/Bogart/Lesaint all provide a predictable result and thus would be obvious to combine according to the recent court decision of KSR.

Claim Rejections - 35 USC § 101

2. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claim 1-12, 14, 16-26, 28-29 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Under the statutory requirement of 35 U.S.C. § 101, a claimed invention must produce a useful, concrete, and tangible result. For a claim to be useful, it must yield a result that is specific, substantial, and credible (MPEP § 2107). A concrete result is one that is substantially repeatable, i.e., it produces substantially the same result over and over again (*In re Swartz, 232 F.3d 862, 864, 56 USPQ2d 1703, 1704 (Fed. Cir. 2000)*). In order to be tangible, a claimed invention must set forth a practical application that generates a real-world result, i.e., the claim must be more than a mere abstraction (*Benson, 409 U.S. at 71-72, 175 USPQ at 676-77*). Additionally, a claim may not preempt abstract ideas, laws of nature or natural phenomena nor may a claim preempt every "substantial practical application" of an abstract idea, law of nature or natural phenomena because it would in practical effect be a patent on the judicial exceptions themselves (*Gottschalk v. Benson, 409 U.S. 63, 71-72 (1972)*). (Please refer to the "Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility" for further explanation of the statutory requirement of 35 U.S.C. § 101.)

Regarding **Claim 1**, a system is claimed composed of "interfaces" and "modules", which are computer programs per se, not clearly embodied on a computer readable

medium. **Claims 14 and 18** are similar and **Claim 28** recites a web interface and various modules. Computer programs per se are printed matter and therefore not statutory. See MPEP 2106.01. **Claims 2-12, 16, 17, 19-26 and 29** depend on **Claims 1, 14, 18 and 28** and are therefore not statutory at least for the reasons given above for **Claims 1, 14, 18 and 28**.

Claim Rejections - 35 USC § 103

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

14. **Claims 1-12, 14, 16, 17 and 30-36** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Weigel** in view of **Bogart US 6,163,607** (hereinafter **Bogart**) and further in view of Lesaint US 6,578,005 (hereinafter **Lesaint**).

Weigel, Don; Cao, Buyang; "Applying GIS and OR Techniques to Solve Sears Technician-Dispatching and Home Delivery Problems", Jan/Feb 1999, Interfaces, 29, 1, ABI/INFORM Global, p.112.

Regarding **Claim 1**, Weigel teaches:

a service request interface configured to communicate with a service request system;

Page 113 paragraph 3 line 15-16, customers call in to communicate with the service request system.

Page 114 column 2 line 13-14, the EHDS/CARS interfaces with the mainframe to receive service orders.

a dispatch system interface configured to communicate with a dispatch system; and

Page 114 column 2 line 15-17, system uploads dispatching information, i.e. through a dispatch system interface configured to communicate with a dispatch system.

a service assignment module configured to assign a service request to a technician from a pool of available technicians based on their skills and abilities and a first current location of the technician

Page 116 column 1 line 20-26, the system (i.e. service assignment module) assigns service requests to technicians from a pool based on their skills and abilities to provide repair, i.e. their primary and secondary skills.

Page 118 column 2 para 1, 2, the GIS system utilizes the starting point of the technician each day as an input for the scheduling of a technician (i.e. their "first current" location where the examiner is considering current to be defined by Webster's as "generally accepted, used, practiced or prevalent at the moment" where at the moment the scheduling occurs the "current" location of the technician is taken to be the beginning point of their route.

the service request received via the service request interface,

Page 114 column 2 line 13-14, the EHDS/CARS interfaces with the mainframe to receive service orders

notify the technician of the first service request via the dispatch system interface.

Column 2 line 15-18, system has eliminated dispatchers from communicating with local workforce, thus the system notifies the technicians directly from the dispatch system interface.

Page 115 Figure at top of page – the technician is automatically provided with service manifests, directions and maps, i.e. notified of the service request through this interface.

wherein the historical technician performance statistic includes an average tavel time to reach a service location associated with a service order and where service times at service locations are tracked.

Page 116 column 1 line 26-29, average travel time is average completion time of a task associated with the service request since traveling to the location requiring service is a task associated with the service request.

Page 116 column 2 line 19-20 total service time is tracked for service calls (note transit time is tracked as a separate entity).

Weigel does not teach:

Assigning a technician based at least in part on a historical technician performance statistic;

Bogart teaches:

Assigning a technician based at least in part on a historical technician performance statistic.

Column 3 line 20-25, technicians historical performance is used to assign calls – see also column 5 line 36-40, call assignment is based on this historical performance.

Weigel and Bogart both address providing workforce scheduling, thus both Weigel and Bogart are analogous art.

Bogart teaches that scheduling an employee based on their historical performance helps maximize the performance of an organization by taking the individual performance level of the employees into account (column 3 line 6-10). Bogart further teaches that using a weighted average takes historical performance into account, but places a greater weight on performance that is more recent, to take into account improvements in performance the technician may experience over time.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teachings of Weigel, regarding providing a service technician scheduling system, to include the step of basing scheduling at least in part on historical

employee performance, as taught by Bogart, because it would maximize the performance of an organization by taking the individual performance level of the employees into account.

Weigel teaches a scheduling and dispatch system that primarily conducts scheduling for a days work for technicians. It estimates windows of completion for various tasks and suggests that tasks may take longer than scheduled, but does not explicitly teach assigning requests based on receiving task completion data.

Weigel and Bogart do not teach:

assign a second service request to the technician based at least in part on a second current location of the technician after receiving service order completion data and frame order completion data related to the first service request wherein the service order completion data and the frame order completion data related to the first service, request indicate that tasks associated with the first service request are complete.

Lesaint teaches:

assign a second service request to the technician based at least in part on a second current location of the technician after receiving service order completion data and frame order completion data related to the first service request wherein the service order completion data and the frame order

completion data related to the first service, request indicate that tasks associated with the first service request are complete.

Column 7 line 20-23, technicians are assigned second tasks based on indicating that their first task is complete. See line 23-25, these technicians are working on telecommunications network (i.e. performing service orders and frame (i.e infrastructure) orders). – see also column 7 line 60-67, the assignment of tasks depends on their location (where they are and where the next task is – i.e. travel time is taken into account in scheduling).

Lesaint, Weigel and Bogart all address scheduling of workers to perform tasks, thus Lesaint, Weigel and Bogart are analogous art.

Lesaint teaches that in telecommunications network scheduling, that the duration of the tasks may be on order of magnitude of the response times (i.e. the scheduling requires real time allocation of resources). (see column 1 line 21-26).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the combined teachings of Weigel and Bogart to include the real time scheduling approach of dynamically scheduling workers to next tasks based on receiving telecommunications network task repair completion data, because it would improve the assignment of tasks to resources.

Regarding **Claim 2**, Weigel teaches:

a geo-location interface configured to access a global positioning system, the global positioning system indicating the first current location of the technician, the second current location of the technician or any combination thereof.

page 119 column 1 line 31-35, the system accesses a GIS system to indicate location of a centroid (seed point) that indicates a location of the technician. The ArcView GIS system also provides a current location of the definition where the examiner is using "current" as defined above, i.e. the starting point of the route for a technician is their "current" location, since it is the location in practice or use by the GIS (i.e. the GPS system). The GIS provides for global positioning in determining an address for the starting point of the technician in scheduling routes since this address is unique (i.e. refers to a unique point on a map) and is understood as such globally.

The examiner notes that the claims cite a global positioning system (i.e. not a GPS system). Further since Weigel teaches a routing for technicians (where that route may be changed based on additional factors), that routing as indicated using the GIS system is a first through last current position of a technician since it indicates all the stops they will make. – see page 123 column 1 para 2; page 122 column 1 para 2, the traveling salesman solution used by Weigel in combination with the GIS system (i.e. a global positioning system) indicates the route for the day that includes a series of stops with time windows.

Regarding **Claim 3**, Weigel teaches:

a service request status interface for accessing status data associated with the first service request; the second service request or any combination thereof.

Column 2 line 13-19, the system provides online reports (i.e. through a service request status interface). These reports provide status data associated with the service request including various times, e.g. start and total service time.

Regarding **Claim 4**, Weigel teaches an online service request status interface, as per above in Claim 3, but does not teach:

wherein the service request status interface is a web-based interface, as per Claim 4 or **wherein the service request status interface is accessible to a competitive local exchange carrier**, as per Claim 5.

However, Official Notice is taken that it is old and well known in the art for interfaces, including status request interfaces, to be web-based, as per Claim 4 and accessible to a local utility (i.e. accessible to a CLEC). Providing web-based status interfaces (as per Claim 4) including those accessible to a CLEC, as per Claim 5, enable a local utility to access status inquiries flexibly from a variety of locations since they are accessing the interface through the internet and further provide for a status update on work orders.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teachings of Weigel, regarding providing a service technician scheduling system and online status reporting, to include the step of providing a web-based status interfaces (as per Claim 4) including those accessible through a dial-up connection (i.e. to a CLEC as per Claim 5) because it would provide a company who had dispatched field technicians to perform service orders with flexibility in accessing a service request status since they are accessing the interface through the internet and would provide the company with status information regarding work orders.

Further more regarding Claim 5, Weigel and Bogart do not teach service technician scheduling in the context of a telecommunications network. Lesaint teaches service technician scheduling in the context of a telecommunications network.

It is old and well known in the art for service technicians to be associated with a ILEC (e.g. a local phone company).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teachings of Weigel, Bogart and Lesaint to include where the technician is associated with an ILEC, because it would provide for efficient scheduling of ILEC technicians in a dynamically changing service environment.

Regarding **Claim 6**, Weigel teaches:

a system interface configured to access a operation management system,

Page 114 column 2 line 13-15, Sears mainframes interfaces with the CARS/EHDS system (i.e. the operation management system since it manages both delivery and service requests).

the service assignment module configured to transfer service requests to the operation management system via the system interface.

Page 114 column 2 line 13-15, and Figure 2, page 115, CARS/EHDS receive service requests from the mainframe through the system interface.

Note the use of the term "frame" and "frame related" above comprise non-functional, descriptive language.

Also, it would have been obvious to adopt the above service system to a frame system to provide frame related service requests since it is old and well known in the art the frame systems require service and service requests.

Regarding **Claim 7**, Weigel does not teach:

a scoring interface configured to access a technician scoring system, the technician scoring system storing an efficiency scoring associated with the technician.

Bogart teaches:

a scoring interface configured to access a technician scoring system, the technician scoring system storing an efficiency scoring associated with the technician

Column 2 line 25-30, the system (i.e. a scoring interface) stores scoring information (i.e. an efficiency) based on the employee's (i.e. technician's) performance during the last call-see also column 4 line 55-60.

Weigel and Bogart both address providing workforce scheduling, thus both Weigel and Bogart are analogous art.

Bogart teaches that scheduling an employee based on their historical performance helps maximize the performance of an organization by taking the individual performance level of the employees into account (column 3 line 6-10).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teachings of Weigel, regarding providing a service technician scheduling system, to include the step of storing an employee's efficiency scoring, as taught by Bogart, because it would maximize the performance of an organization by taking the individual performance level of the employees into account.

Regarding **Claim 8**, Weigel teaches:

a statistical knowledge interface configured to access a statistical knowledge system, the statistical knowledge system storing statistical data associated with the service request.

Page 116 column 1 line 11-15 & 26, the assignment rules module accesses the system to store statistical information associated with the service request. In this case the statistical data is average travel time.

Regarding **Claim 9**, Weigel teaches tracking the number of completed service calls (i.e. requests), page 127 Table 2 "Completed Calls".

Weigel does not teach:

a billing system interface configured to communicate with a billing system, the billing system to receive completion data associated with the service request.

Official Notice is taken that it is old and well known in the art that Sears has a billing system to ensure customers are billed for the fulfillment of their service request.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teachings of Weigel, regarding tracking the completion of service requests to include interfacing said completion data with a billing system to ensure that customers are billed upon the completion of service requests.

Regarding **Claim 10**, Weigel teaches:

a user interface to provide data associated with the technician.

Page 116 column 1 line 11-14, the assignment module allows entry of data associated with the technician to be entered and customized (i.e. thus a user interface).

Regarding **Claim 11**, Weigel teaches:

wherein the user interface is a web enabled interface.

Page 128 Column 2 line 18-25, the user interface used in assigning service requests, is also included in a web-based (i.e. web-enabled) application.

Regarding **Claim 12**, Weigel teaches the web enabled interface as per Claim 11 above, but does not teach:

wherein the user interface includes a JAVA component.

However, Official Notice is taken that it is old and well known in the art for a web application for an interface to include a Java component. The java language provides a way to easily and robustly incorporate various functionalities into a web browser.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teachings of Weigel and Bogart, regarding providing service dispatch capability and a web-based user interface, to include the step of wherein the

user interface includes a Java component, because it provides an easy and robust way to incorporate various functionalities into a web browser.

Claims 14, 16, 17 and 30-36 recite similar limitations as those recited in **Claims 1-12** above, and are therefore rejected under the same rationale.

Furthermore regarding claim 30, Weigel teaches a GIS system that takes into account travel times and locations that technicians must be. Lesaint teaches that the location of the technician and their travel time to the next task is taken into account in scheduling and assigning tasks to them (Column 31 line 31-40). While Weigel, Lesaint and Bogart do not teach a near real time global positioning system (i.e. a "GPS" system) for use in scheduling, these devices are old and well known in the art to provide location indications of users carrying these devices in the field.

Since both Weigel and Lesaint take into account scheduling, dispatching and assignment of tasks where travel and location of the technician is a consideration, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the combined teachings of Weigel, Lesaint and Bogart to include the step of using near real time "GPS" as an input in scheduling, because it would improve the accuracy of location determination and thus improve the accuracy of scheduling in a dynamic environment where location and travel time is an important factor in scheduling a technician's next task.

15. **Claims 18-26, 28, 29, 38 and 39** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Norand**'s mobile wireless Pen*key computer product offering (hereinafter **Norand**) in view of Lesaint US 6,578,005 (hereinafter **Lesaint**).

Norand is contained in the following references:

Norand.com webpage of 2-6-98, "NyNex utilizes Pen*Key® mobile computers to retrieve information and execute transfer activity", pp.1-4, retrieved from the internet: web.archive.org/web/19990206125452/www.norand.com/case_nynex_more.html, hereinafter **Reference A**).

Norand.com webpage of 2-6-98, "Norand – Field Service", pp.1-2, retrieved from the internet: web.archive.org/web/19990206122627/www.norand.com/sol_fieldservice_tech.html, hereinafter **Reference B**).

Norand.com webpage of 2-6-98, "Are you getting ready to catch the wireless wave", pp.1-8, retrieved from the internet: web.archive.org/web/19990206122343/www.norand.com/wp_wirelesswave.html, hereinafter **Reference C**).

Norand.com webpage of 2-6-98, "Introducing the Norand RapidREP™ Solution from Intermec Technologies Corporation", pp.1-3, retrieved from the internet: 19990206114807/www.norand.com/pr_rapidrep.html, hereinafter **Reference D**).

The above references are from Norand's website, all archived on February 6, 1998. Norand provided mobile computers that were configured using a variety of software and hardware configurations for a variety of field uses. In each case, users entered data that was recorded by the mobile laptop to wirelessly connect the user to a network from the field. Norand's mobile laptop also provided instructions to the mobile user depending on the situation and particular application.

While it is not clear or readily apparent that the disclosed functionalities were available in one packaged service or offering, these references clearly show that Norand, as a whole, made these functionalities available. These functionalities were all designed to provide information to a user working in the field, so that information was available at their fingertips –this automation was necessary to improve their productivity and make their jobs easier. Therefore, the examiner submits that it would have been obvious to one of ordinary skill in the art of mobile wireless computing to offer any permutation of these functionalities to meet a mobile user's needs, thereby improving their productivity and making their tasks in the field easier. Therefore, it would have been obvious to combine the following limitations separately, as taught by the Norand references as laid out below.

Regarding **Claim 18**, Norand teaches:

a mobile technician interface configured to communicate with a mobile technician monitoring system;

Reference A page 2 para 4, 6; the technician has a mobile interface to communicate with the monitoring system (i.e. the system receiving the technician's commands from the mobile Norand computer). The examiner notes that the terms "mobile technician monitoring" are non-functional descriptive material because they do not structurally affect the remainder of the claim.

a frame order management system interface configured to communicate with a frame order management system;

Reference A page 2 para 4, the mobile technician's interface is configured to communicate with a management system through an interface (i.e. Starmem – see also page 3 para 2 & page 2 para 2, Starmem is an interface the communicates with the Loop Assignment control system.

a web based order status reporting interface; and

Reference D page 2 para 1, web-based applications that support operations,

Reference B page 1 para 2, when a job (i.e. a service order) is complete, a button is pressed to begin the billing cycle (i.e. since the job is complete, i.e. the service order status, the customer is billed).

an order status monitoring module configured to access the mobile technician monitoring system via the mobile technician interface to receive service order completion data associated with a service request

Reference A page 2 para 1 & 6, a module receives data from the technician's mobile computer – this data is associated with a request. The technician sending a

request to through a switch as part of an order is completion data associated with a service request.

and configured to access the frame order management system via the frame order management system interface to receive frame order completion data associated with the service request,

Reference A page 2 para 1 & 2, the server accesses the switch to receive completion data that the switch has been thrown – see also page 2 para 2, the data stored by COSMOS is frame order completion.

and wherein the order status monitoring module is configured to provide an order status associated with the service request via the order status reporting interface.

Reference A page 1 para 3, the records (i.e. including the orders for switch processing in page 2 para 1) are updated, i.e. provide an order status.

Norand teaches dispatching technicians, assigning them service requests in the field through their handheld computers, but does not teach assigning requests through two different interfaces (i.e. a mobile technician interface and a frame order management system interface). However it is old and well known in the art that making functionalities separate that were integral does not make the differences patentably distinct (see In re Wolfe, 116 USPQ 443, 444 (CCPA 1961)) and see In re Harza, 124 USPQ 378 (CCPA 1960) "Mere duplication of parts has no patentable significance

unless new and unexpected result is produced"). This is known to improve robustness and ease of repair by having separate parts.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teachings of Norand to include two separate interfaces for receiving service requests, because it would make the resulting system more fault tolerant and easier to repair by having two separate systems provide the interface functionality and it is further known that making functionalities separate that were integral does not provide a patentable distinction.

Regarding **Claim 19**, Norand teaches completing a service order as discussed above. Norand teaches a order status monitoring module, service order completion data and frame order completion data, as discussed above.

wherein the order status monitoring module reports a complete status associated with the service request upon receipt of both the service order completion data and the frame order completion data.

Reference A page 2 para 6, the module reports a complete status when the user touches the 'throw' button.

Regarding **Claim 20**, Norand teaches:

an internal service management interface configured to communicate with an internal service management system,

Reference A page 2 para 2, outside plant engineer enters work orders through an interface into the system.

and wherein the order status monitoring module is configured to access the internal service management system to receive the internal service completion data.

Reference A page 2 para 2, the system (COSMOS) stores the service completion data.

Regarding **Claim 21**, Norand teaches:

a service order request interface configured to communicate with a service order request system; and

Reference A page 2 para 2, the entering of orders into COSMOS (i.e. a request interface communicating with a request system, i.e. COSMOS).

an order dispatch module configured to access the service order request system to receive the service request.

Reference B page 2 para 2, dispatchers assign calls through assigning the service order request to technician's in the field. – see also page 1 para 2, the dispatching of service orders to the field is automated, i.e. through a dispatch module.

Regarding **Claim 22**, Norand teaches:

a user interface configured to provide configurable views of data associated with the mobile technician monitoring system, the frame order management system, and the order status monitoring module.

Reference A page 3 para 1 & page 2 para 6, a backlit display provides for a configurable view of data associated with the systems and monitoring module discussed above. The views that allow a user to identify a switch and through it on the Norand display also provide for configurable views of data associated with the systems and module, as the switch data is associated with these systems and module.

Regarding **Claim 23**, Norand teaches:

wherein the user interface includes a web-enabled interface.

Reference D page 2 para 1, web-based applications (i.e. interfaces) that support operations are part of the Norand offering.

Regarding **Claim 24**, Norand teaches providing a user interface that runs on a portable PC that is running windows (Ref C page 6 para 3) and that is providing the latest wireless internet applicatiosn (Ref C page 2 para 1). Norand does teach where the user interface includes a JAVA interface component.

However, Official Notice is taken that it is old and well known in the art of internet computing to use interfaces that utilize object oriented programming methods, including using JAVA components.

JAVA components are a known, reliable way to provide an interface that accesses the internet.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teachings of Norand, regarding providing for wireless PC connectivity to the internet, to include the step of where the user interface includes a JAVA component, because it would provide a reliable way to interface the internet.

Regarding **Claim 25**, Norand teaches:

An inventory provisioning interface configured to access a public switch telephone network inventory system.

Reference D page 6 para 3, the handheld (i.e. interface) is configured to provide access to an ERP system. The examiner notes that the terms "inventory provisioning" and "public switch telephone network" are non functional descriptive material and do not patentably distinguish the invention of the Norand references.

Regarding **Claim 26**, Norand teaches:

Wherein the order status reporting interface is configured to provide access to a competitive local exchange carrier.

Reference A page 2 para 2, 3, the mobile computer (i.e. interface) can access a carrier (i.e. the central office switch) see also para 6, the interface can access the carrier to throw switches. The examiner notes that the terms "order status reporting"

and "competitive local exchange" are non functional descriptive material and do not patentably distinguish the invention of the Norand references.

Claims 28, 29, 38, 39, 41 and 42 recite similar limitations to those addressed by the rejection of **Claims 18-26** above and are therefore rejected under the same rationale.

Furthermore regarding **Claim 28**, Norand teaches that the mobile wireless computing platform allows for internet access and web browsing. Norand teaches that dispatchers can use the system to receive status updates on service calls (Reference B page 2 para 1). While Norand does not explicitly teach that the dispatcher is receiving the status update via a webpage, Official Notice is taken that it is old and well known to use web pages to display information based on receiving information over the internet to take advantage of the internet's wide coverage and ease of use. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teachings of Norand regarding dispatchers receiving status update information from the field and the use of webpages on the mobile computing platforms to provide dispatchers the webpage and internet capability to receive the status updates because it would take advantage of the widespread availability and ease of use of the internet.

Furthermore regarding **Claim 41**, the limitations are taught above regarding displaying task status using webpages displayed over the internet. Since Norand

teaches a system that manages service calls (i.e. a first task and a second task), it would further be obvious to display the first task and second task on a webpage, because it is old and well known in the art of the internet to use the widespread availability and ease of use of the internet to display information.

Furthermore regarding **Claim 42**, since Norand teaches dispatching technicians to service calls (Reference D page 2 para 1 – since the system is for management of "field" service calls, this implies that the service locations differ in the field), this would include at least a first service location and a second service location.

Conclusion

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jonathan G. Sterrett whose telephone number is 571-272-6881. The examiner can normally be reached on 8-6.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tariq Hafiz can be reached on 571-272-6729. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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